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ABSTRACT

An indoor simulated archaeology site for use in a college level introductory archaeology course is described. Housed in the basement of a building on campus, the site simulates an eight-layered French rock shelter. Layers contain "remains" of a microband of Neanderthals, a Lower and Upper Aurignacian group, an Upper Perigordian group, Magdalenian groups, and an Azilian group. Modern French garbage and grass cover the top. Artifacts include lithic and bone tools, a full skeletal burial, hearths, animal bones, ochres, and ritual and art items. Limestone pebbles simulate sterile layers and soils are colored and textured. The project cost $1500 and involved 300 hours' labor. After a class session devoted to field techniques, teams of students excavate for 15 hours, using measurements, notebooks, maps, and modern standards of labelling and wrapping. Following excavation, students analyze data and prepare site reports. Evaluations by the first class of students involved in the project were consistently higher than those of a previous archaeology class not using the simulation. (KC)

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SITE SIMULATION IN TEACHING ARCHAEOLOGY

A HANDS ON APPROACH

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If you are my age or older, when you heard the title of this paper, "Site Simulation in Teaching Archaeology," your reaction was probably, "Oh, not that old chestnut again." If you are relatively new to archaeology, your reaction might have been, "Ah, now there's a new approach." The truth is a little of both. The idea of using simulated sites in teaching archaeology is not new, but my specific site has a somewhat different purpose from the simulated sites noted in the earlier literature. Instead of using a simulated site to teach field techniques for a semester to career oriented students, my site was designed to be used in introductory archaeology courses of 50-100 students having a mixed bag of backgrounds and interests, and where the field experience is but one-third of the course. The first third of the semester is devoted to concepts and theory, the middle third to methods via excavating the simulated site, and the last third to analysis of data. The goal of the course is to allow all kinds of students, majors and non-majors alike, to play the role of professional archaeologists by doing, not just hearing about, archaeology. The course serves the needs of both students who are taking their one and only archaeology course and students for whom this is but the first step in what will become a career. For the one-time only students, they will hopefully appreciate the goals and methods of professional archaeology and become members of a better informed citizenry. For the career minded students, it is a way to learn the basic skills of recovery, recording, and analyzing, and to find out early, before investing a great deal of time and money, if they are suited for archaeology work.

Since most of us at one time or another teach introductory archaeology, I hope that a discussion of the what, why, and with what results, may be of general interest.

I chose to build a teaching site initially because of personal frustrations of just talking about excavating techniques or showing slides of various digs in progress. Even the most eager student can learn just so much by only hearing about excavating. The ideal way to teach field techniques is to take students to a real site and have them learn by doing. Or is this ideal? A site has to be located nearby, permission to excavate has to be secured, transportation or maintenance has to be provided, and most important, there is the ethical problem of excavating merely as a student exercise, a problem which at the least involves the inherent conflict between teaching and research. A simulated site has other advantages over a real site as well: it allows the instructor to evaluate what a student is doing right or wrong since the instructor already knows what is in the site. It also allows the instructor to know what percent of artifactual material is actually being recovered and to correct the problem when it is occurring. In my site, 95% of the artifacts were recovered. What the students were missing were the micro-tools, and this kind of mistake was correctable on the spot.

In the past, a number of teachers have dealt with the tactical and ethical problems of using real sites as teaching aids, by building simulated sites. Some of the simulations were in miniature, the advantages being that they are easy to put up and inexpensive to build, but with the disadvantages of providing no depth, involving no real work on the part of the student, and appearing to be play time activity. Some simulated sites were built outdoors, the advantage being one of more realism but with the disadvantages of no security and being at the mercy of the elements. I chose to build a full-scale site inside to overcome these problems. A full-scale, inside site has its own set of problems, but the advantages far outweight the disadvantage.

Yes, it is time consuming to build and it does involve an initial outlay of funds, but it has the advantages of a certain realism including the excitement of discovery, security, permanence, and ease of rebuilding. And it is climate proof.

We named our site Abri Deahl, abri for the French rock shelter it simulates, and Deahl for the name of the building where it is housed in the basement. With an initial grant of $1500 from the College, University carpenters built an 8 cubic meter wooden box, 4 meters by 2 meters by 1 meter high, with a reinforced steel-plated base for stability and strength. The two long sides have removeable 4 inch boards which are removed as the excavation progresses for ease of access and so students don't feel they are digging in a box. My two graduate assistants and I did the rest of the work, a job which took 2½ months, the human labor totalling some 300 hours. Two-thirds of that time was spend on a one-time-only job of getting the 17 tons of dirt and sieving it to remove all items not found in a real site. The cost of the box alone was $900, but it could be built for much less with student labor and used lumber. The rest of the funds were used to purchase excavation and laboratory equipment, and a modest library. The box was lined in heavy plastic, and the dirt and artifacts were carefully placed to simulate a real archaeology site.

I chose an idealized French rock shelter site as the model for the simulated site, a model typical of sites in the Dordogne or the Pyrenees. I chose the French site for several reasons: it simulates the kind of site I have personal excavating experience with; I could and did make the lithic, bone, and ritual/art artifacts that would be found at such a site, and because French sites offer the kind of stratification which give students

the challenge of identifying different strata, and sterile versus cultural layers. Other models could serve easily as well. The result was an 8 layered site: at the bottom we simulated the remains of a short-time stay of a microband of Neandertals who in our simulation chose to camp under the rock shelter. The second layer simulates a Lower Aurignacian group, the third layer an Upper Aurignacian group who buried one of their own at the foot of the site; the fourth an Upper Perigordian group who left samples of their art work behind; the 5th through the 7th simulated Magdalenian groups, and the 8th an Azilian group. On the top, we placed modern French garbage and grass seed which, after three weeks, gave the appearance of a French field under a rock shelter overhang.

The artifacts correspond to the frequencies found in real sites. Lithic and bone tools, a full skeletal burial complete with grave goods, 5 hearths, animal bones, ochres, ritual and art items, were appropriately placed in the layers. We used limestone pebbles to stimulate sterile layers, different colored and textured soils to simulate cold and warm periods, and we scattered sea shells in one layer to simulate a higher ocean level which made the site for that period only, within a day's walk to the ocean.

After a class session devoted to discussing field techniques, the class began excavating. The 60 students in the class were divided into teams of 8, both for excavation and analysis purposes. Each student excavated his or her square meter for a total of 15 hours during the 3½ week period. They were given written pamphlets explaining measurements, use of notebooks and maps for noting artifacts. They labelled, wrapped, and mapped according to modern standards.

At the end of the excavation period, the students went directly into

the third part of the course -- analysis of data -- and what better way to learn data analysis than by analyzing the data they had just excavated. Each member of the team played the role of a site expert: a crew chief, or an expert in lithics, bone tools, art, soils, fauna, geology, or a human osteologist. At the end of the analysis section, each team wrote a site report, with each expert contributing a mini chapter on his or her area of expertise, with the crew chief acting as editor and writing the introduction and conclusions. Class lectures supplemented by pertinent readings, hands-on analysis of the artifacts, and personal conversations with the instructor or other faculty, provided the necessary information for their site reports.

The results of using the simulated site as a way to teach not only field techniques, but to use in data analysis and as a focus for concepts and theories, was highly successful. The final site reports showed students understood the relationship between field work and knowledge. The students were able to play the role of professional archaeologists from the beginning of excavation through to the final report writing state. They learned how to excavate, how to analyze artifacts, cooperation, how to find out what they didn't know, and how to turn artifacts into knowledge. This simulated site is, however, no substitute for a whole course in field and laboratory techniques, and no substitute for field school or a real summer in the field. It is merely an initial look at what archaeologists do, how they do it, and what they do with what they find.

The project was not given a controlled, critical evaluation. Student written evaluations, however, when compared with the previous class taught by the same instructor, were consistently higher. Their qualitative statements were exceptionally positive. Four students from that first class spent the

subsequent summer excavating real sites: one at a field school, two at a state historical site, and one in France. The fact that the two at the state site were given immediate supervisory jobs speaks of some level of perceived competence. After their summer excavating at real sites, all four reported that the experience at the simulated site was extremely valuable.

As for the future of the site, it has now been rebuilt and is ready for the spring crop of students. A dozen students from last year volunteered to help rebuild this year's site: 3 career minded students were chosen and given 3 hours of credit to help rebuild. We used last year's dirt, stored in bins according to color, unwrapped last year's artifacts, remade the ritual objects which were damaged last year, and in a reasonably short period of time, rebuilt the site. The instructor's time spent was minimal.

A simulated site could be successfully used in teaching the field methods portion of any introductory archaeology course as well as provide the focus for the entire course. In addition, this kind of full-scale simulated site could be used in museums, high schools, and in community service projects where people have an interest in finding out what it is like to do proper archaeology. This will hopefully reserve real sites for real research projects.